

CLOSURE PLUG FOR A CONTAINER

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Abstract

The closure part (1) has at the top end a gripping edge (3) and a sealing bulge (4) which can be inserted into the opening of the vessel to be closed, is cylindrical in this case and can also have the form of a plurality of bulges, ribs or lamellae lying above one another. Furthermore, a cylindrical part (5) also leads from the gripping edge (3), which part is open in the direction of the container interior and in the region of its open end has an annular projection (6). In the illustrated example, this projection is directed inwards and co-operates with a complementary, outwardly directed projection (7) on a cylindrical extension (8) of the bellows (2), as a result of which the two parts (1) and (2) are positively connected. This connection can be brought about in a simple manner by machine by the elastic extension (8) of the bellows being pressed into the opening of the cylindrical part (5), during which process it is elastically deformed and after passing the projection (7) it springs back into its original

shape.



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PATENT SPECIFICATION (11)

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(54) A CLOSURE PLUG FOR A CONTAINER

(71) I, ALBERT GEIGER, of Maximilianshöhe 13, 8100 Garmisch-Partenkirchen, Germany, a German citizen, do hereby declare the invention, for which I pray that a patent may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The invention relates to closure plugs for containers which contain small articles, such as, for instance, bottles or tubes for tablets or pills. In such containers it is usual to interpose between the closure plug and the contents a press-pad which prevents the contents, for example, tablets being tossed about and so damaged in transport.

According to the invention, there is provided a closure plug for a container, comprising a closure portion with a grip at its upper end and an open cylindrical part extending from said grip, and a compressible portion with concertina folds and a cylindrical extension engaging with said cylindrical part so as to join the closure portion and the compressible portion.

It is possible in a further development of the invention to provide openings in the end surfaces of the compressible portion and to place an insert of hygroscopic material in the cylindrical part of the closure portion, the said insert being then retained by the end surface of the compressible portion engaging with the closure portion.

An embodiment of the invention is illustrated, by way of example, in half-section in the accompanying drawing and is particularly described below.

The illustrated closure plug consists of two main parts, namely the closure portion 1, mostly of plastics material and produced by injection moulding, and the compressible portion 2 with concertina folds, likewise of thermoplastics material but made by a blowing process. The closure portion 1 has a grip 3 at its upper end and a sealing bead 4, cylindrical in this case, which is insertable into the opening

of the container to be closed. The bead 4 may also assume the form of several superimposed beads, ribs or plates.

In addition, an open cylindrical part 5 extends from the grip 3 towards the interior of the container and has an annular projection 6 running round the perimeter of the cylinder close to its open end. In the illustrated example this projection is directed inwards and co-acts with a complementary outwardly directed projection 7 upon the cylindrical extension 8 of the compression portion 2, whereby the two members 1 and 2 are positively connected.

This connection can be produced in a simple way by machine by pressing the resilient extension 8 of the compressible portion into the opening in the cylindrical part 5, which is elastically deformed and springs back into its original shape once the projection 7 has passed it.

It will be understood that the projection 6 may also be directed outwards and co-act with an inwardly directed projection of the compressible portion 2, provided that the end of the compressible portion 2 that is to be joined to the closure portion 1 is not closed as shown but open, so that this open end of the compressible portion can be pushed over the outside surface of the cylindrical part. Also, it is not necessary for the projections, particularly that on the closure portion 1, to be annularly continuous. A plurality of projections may be arranged in segments about the outer or inner perimeter of the cylindrical part.

It is not absolutely necessary to separate the outer cylindrical part forming the sealing bead 4, or carrying other sealing means, from the inner cylindrical part 5. As an alternative, the inner cylindrical part may form the inside surface of the sealing bead 4 and be provided in the vicinity of its open end with a projection corresponding to the projection 6.

If, as is the general practice and illustrated in the case of the described example, the compressible portion 2 is a bag closed at both its ends, it

for example, into the form of a tablet, is then introduced into the cavity 13 in the cylindrical part 5 of the closure portion where it is held by the end surface 9.

5 WHAT I CLAIM IS:—

1. A closure plug for a container, comprising a closure portion with a grip at its upper end and an open cylindrical part extending from said
10 is readily possible to equip the closure plug with a hygroscopic insert which keeps the contents of the container dry.

For this purpose the end surfaces 9 and 10 of the compressible portion 2 are provided with openings 11 and 12, for instance, slits,
15 to allow the air to pass.

An insert 14 of hygroscopic material pressed, grip, and a compressible portion with concertina folds and a cylindrical extension engaging with said cylindrical part so as to join the closure
20 portion and the compressible portion.

2. A plug as claimed in Claim 1, wherein projections are arranged on the perimeters of

both portions, and the projection(s) on one portion snap past the projection(s) on the other portion when they are press-fitted together, to
25 form a positive connection.

3. A plug as claimed in Claim 1 or Claim 2, wherein an insert of hygroscopic material is interposed between the closure portion and the compressible portion before assembly, and the
30 compressible portion has openings in both ends so that the hygroscopic material will communicate with the interior of a container into which the plug is inserted.

4. A plug for a container, substantially as
35 herein described, with reference to and as shown in the accompanying drawings.

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COMPLETE SPECIFICATION

1 SHEET

*This drawing is a reproduction of
the Original on a reduced scale.*

